

# **DYNAMIC RESOURCE ALLOCATION SYSTEMS AND METHODS**

## **ABSTRACT OF THE DISCLOSURE**

Systems and methods are disclosed for facilitating dynamic resource allocation in  
5 a limited memory environment. In one embodiment, a master code image is created that  
includes one or more alternative implementations of an interface. When it is determined  
that a particular implementation of the interface is desired, the alternative  
implementations are removed from the master code image, and the resulting code image  
is compiled. The program is then used to process network traffic. If a condition is  
10 subsequently detected that could be handled more efficiently by one of the alternative  
interface implementations, the process can be repeated, and the resulting program used to  
process further network traffic.